

Amendments to the drawings

Applicants acknowledge Examiner's remarks regarding the drawings. Accordingly, Applicants amended the drawings, assigning a new part number, 40', to the entity 'Downstream Data Interface' of Figure 2, formerly numbered as 40, and assigning a new part number, 46', to the entity 'Downstream Transmitter' of Figure 2, formerly numbered as 46. Applicants additionally assigned a part number 28 to the entity 'Upstream Assembler and Transmitter' of Figure 1B, which lacked a part number. The amended drawings conform to the amended specification. Attached are the replacement sheets including the amended drawings. No new matter is introduced by these amendments.

REMARKS / AGRUMENTS

Applicant(s) respectfully traverse this rejection for the reasons set out below, and ask the Examiner for reconsideration.

Status of the claims

Claims 17, 21, 23, 25, and 37 are objected to by the Examiner because of various informalities.

Claims 1-4, 7-13, 24-31, and 34-36 are rejected by the Examiner under 35 U.S.C. 102 (b) as being anticipated by Ghaibeh et al. (US Patent No. 5,978,374) (Hereinafter referred to as "Ghaibeh").

Claims 5, 6, 14-23, 32, 33, and 37 are rejected under 35 U.S.C. 103 (a) as being anticipated by Ghaibeh et al. in view of a plurality of respective additional applications.

Claims 1, 2, 10, 11, 12, 17, 21, 23, 25, and 37 are currently amended.

Claims 3-10, 13-16, 18-20, 22, 24, 25, 27, 29-33, 35, and 36 are original claims.

Claim amendment

In accordance with requirements set by the Examiner, Applicants amended claims 17, 21, 25, and 37, based on the content of the objections raised by the Examiner. No new matter has been added.

Independent claims 1, 10-12, 28, and 34 were amended to further distinguish between Ghaibeh and Applicants' subject matter. No new matter has been added.

Response to the 35 U.S.C. 102(b) rejection of claims 1, 28, and 34

Claims 1, 28, and 34 are rejected under 35 U.S.C. 102(b) as allegedly being unpatentable over Ghaibeh. Applicants respectfully assert that Ghaibeh fails to teach

at least certain features described in Applicant's subject matter, e.g., as described in detail below.

For example, Amended claim 1 reads as follows:

A communication system comprising:
an optical communication network interconnecting a headend and a plurality of network units;

wherein the headend has a media access controller for issuing data grants and grouping information requests; wherein a data grant being issued at least partially in response to previously received grouping information; and

wherein at least some network units out of the plurality of network units are operable to:

receive ~~data a variable length data packet~~ to be transmitted to the headend;
transmit grouping information ~~associated with the received data reflecting At least a length of the variable length data packet~~; and

transmit ~~data a segmented group of fixed sized data cells, representing the variable length data packet~~, to the headend in response to data grants issued by the media access controller.

Applicants describe a communication system including a headend and one or more network units, wherein the headend issues data grants, i.e., permissions for the network units to upstream transmit a group of fixed sized data cells (e.g., in an ATM format), based on grouping information previously sent by the network units.

The grouping information sent from a network unit to the headend, as described in Applicants subject matter, includes a variable length of a data packet that is converted to a group of fixed sized cells that are upstream transmitted. As described in detail in Applicants' specification, the variable length may refer to, for example, a 'net' payload associated with the upstream transmission, or other features associated therewith, as opposed to, for example, representing a total size of the ATM queue of the upstream transmission.

A considerable feature described in Applicants' subject matter includes a headend issuing one or more grants, at least partially, in response to the above-described grouping information. The prior art, and specifically Ghaibeh, fail to teach at least this feature of the invention. On the contrary - Ghaibeh explicitly teaches

away by describing a system in which "Upstream data transmission is provided on a "permit" basis controlled by the headend based on monitoring ATM cell queue sizes at respective NUs" (Ghaibeh, Col. 2, lines 29-31).

This feature, for example, contrasts issuing grants based on ATM queue sizes of the upstream transmissions, since the network unit may receive a variable length data packet, and not an ATM format. The network unit may transmit the received transmission to the headend in an ATM format. Because of the variable length of the received variable length data packet, and because the network unit transforms the variable length data packet into the ATM format, the transformed data packet may have an ATM queue size that does not reflect the 'net' payload length of the variable length data packet.

Thus, Applicants describe a system in which the variable length of the data packet, and not the ATM queue size affect the grant issuance to the network unit, a feature that Ghaibeh fails to describe.

Therefore, Applicants respectfully assert that claim 1 is patentable, at least over Ghaibeh and respectfully request for the rejection of claim 1 to be removed.

Similarly, independent claims 28 and 34 describe a media access controller, and a method, respectively, comprising features described in the context of claim 1.

Therefore, Applicants respectfully assert that claims 28 and 34 are patentable, at least over Ghaibeh, put alone or in combination together with other applications disclosed by the Examiner, and respectfully request for the rejection of claims 28 and 34 to be removed.

Applicants assert that Claims 2-27, 29-33, and 35-37 that depend on claims 1, 28, and 34, respectively, are patentable at least on the virtue of their dependence on independent claims 1, 28, and 34. Therefore, Applicants respectfully request for the rejection of claims 2-27, 29-33, and 35-37 to be removed.

Conclusion

Applicants believe that in view of the above-presented arguments claims 1-37 should be allowed.

Respectfully submitted,

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